



Mirror Development  
Technology Days 2009  
In the  
Government

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# Welcome

## Welcome

### Old Business

Presentations from 2008 have been distributed via CD – we do not have a sponsor for adding presentations to the Tech Days Website.

If you have not gotten your CD – see Cory Duncan.

### New Business

Tech Days 2010 is scheduled for June 29 – July 1 in Boulder

Tech Days 2011 will likely be near GSFC

### Important Information

Coffee Breaks, Lunch and Receptions

Photograph to be Scheduled.

### Announcements

DII Brochures in back.



# Technology Days 2008

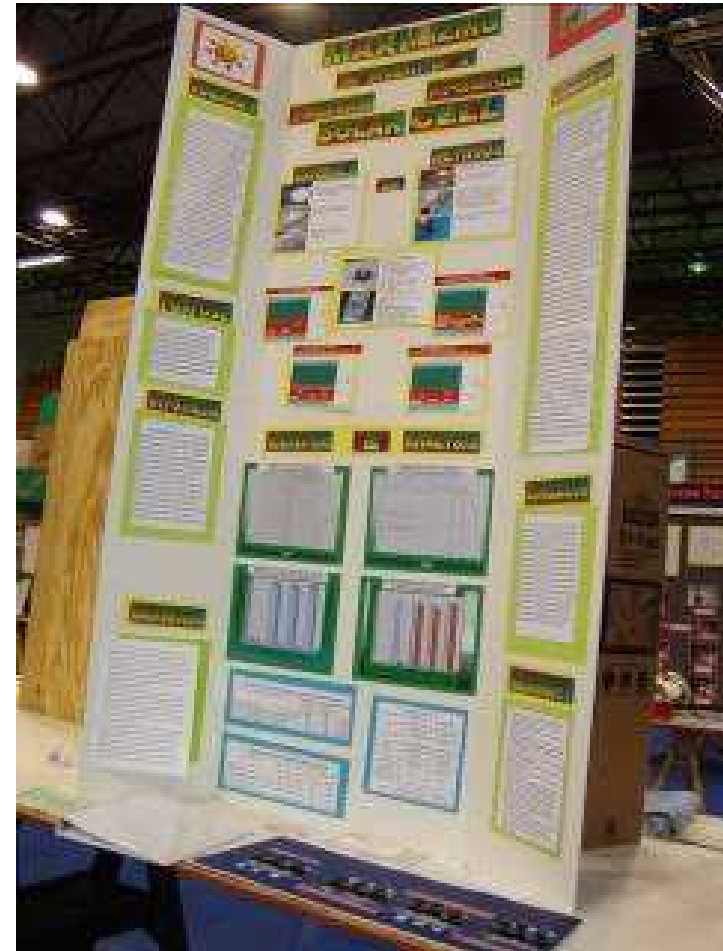




## **2009 Alabama State Science Fair Senior Devision First Award \$150**

Shawn Tuteja, “Maximizing the efficiency of a titanium dioxide dye-sensitized solar cell”, 10<sup>th</sup> Grade, Altamont School.

Shawn added silicon gel into a dye-sensitized solar cell and demonstrated an increase in voltage output as well as an ability to store energy.

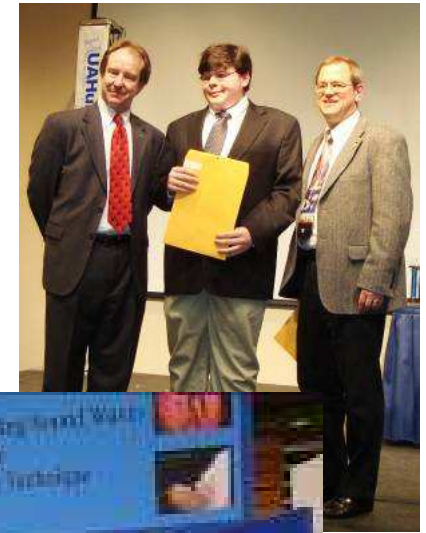




## 2009 Alabama State Science Fair Senior Devision First Award \$150

Matthew Eskridge, “An Investigation of Standing Sound Waves using the Schlieren Imaging Technique”, 9<sup>th</sup> Grade, Covenant Christian Academy

Matthew built a Schlieren Imaging system out of wood, nails and bolts. He used a desk lamp as the light source and a digital camcorder to record his images. He acquired data from a candle flame – taking extra care to explain to me that the Schlieren image was not the flame – then he modulated the position of the Schlieren image via an audio speaker.



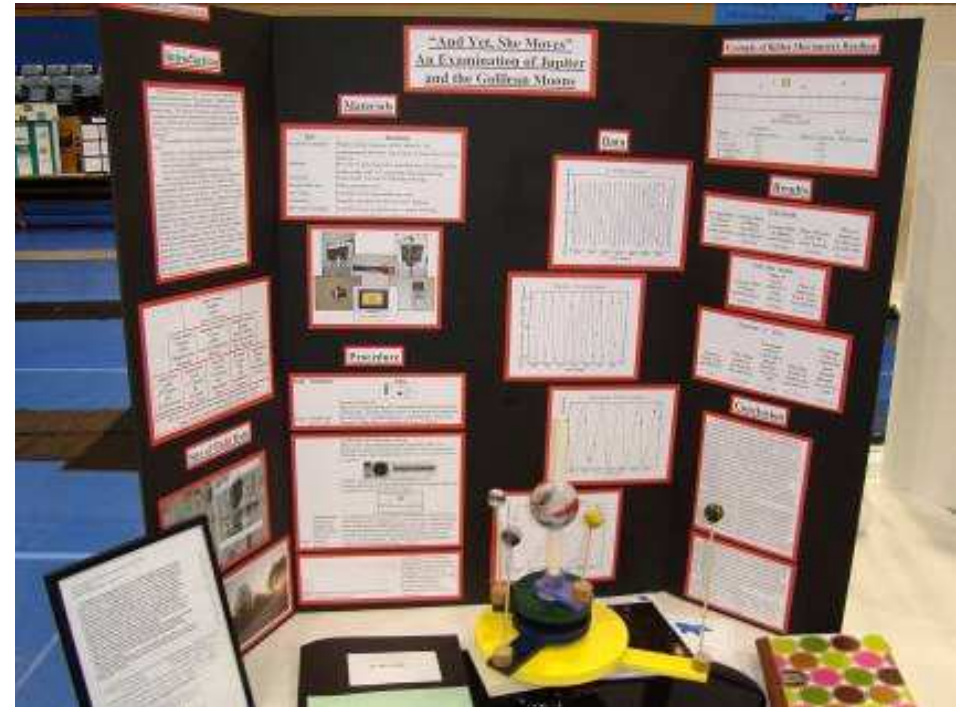


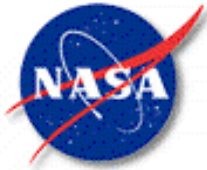


## 2009 Alabama State Science Fair Senior Division Second Award \$100

Meagan Edwards, “And So She Moves – an examination of Jupiter and Her Moons”, 9<sup>th</sup> Grade, Westminster Christian Academy

Meagan repeated Galileo’s experiment proving that the moons of Jupiter orbit around Jupiter. Using a small telescope setup on her driveway, Meagan recorded the angular position of the Jovian moons relative to Jupiter over a period of several months. She then calculated the orbital motion of the moons around Jupiter





## 2009 Alabama State Science Fair Senior Division Third Award \$100

Drew Bismack and Wesley Cobb, “Stealth Technology”, 10th Grade, Westminster Christian Academy

Drew and Wesley did a team project. Their initial goal was explore the role of geometry, reflection and refraction in the ability to ‘hide’ a stealth aircraft. At Regional, I pointed out to them that they had made a significant error in their project. They were using a sonic source thinking that it was electromagnetic radiation. They corrected their error for State and charted a path forward.





## Purpose of Tech Days

Mirror Technology is critical for NASA & DoD missions.

Topics discussed enable missions for next 10 to 20 yrs.

Tech Days has two Goals:

How are we Spending the Taxpayer's money

1. Is the Government Investing the Taxpayer's money wisely  
Are we funding 5 good ideas or 1 good idea 5 times?
2. Are we getting good value for our investment?
3. How can we coordinate our activities to maximize the efficacy of our investments.

Provide a networking opportunity for Vendors and Government.





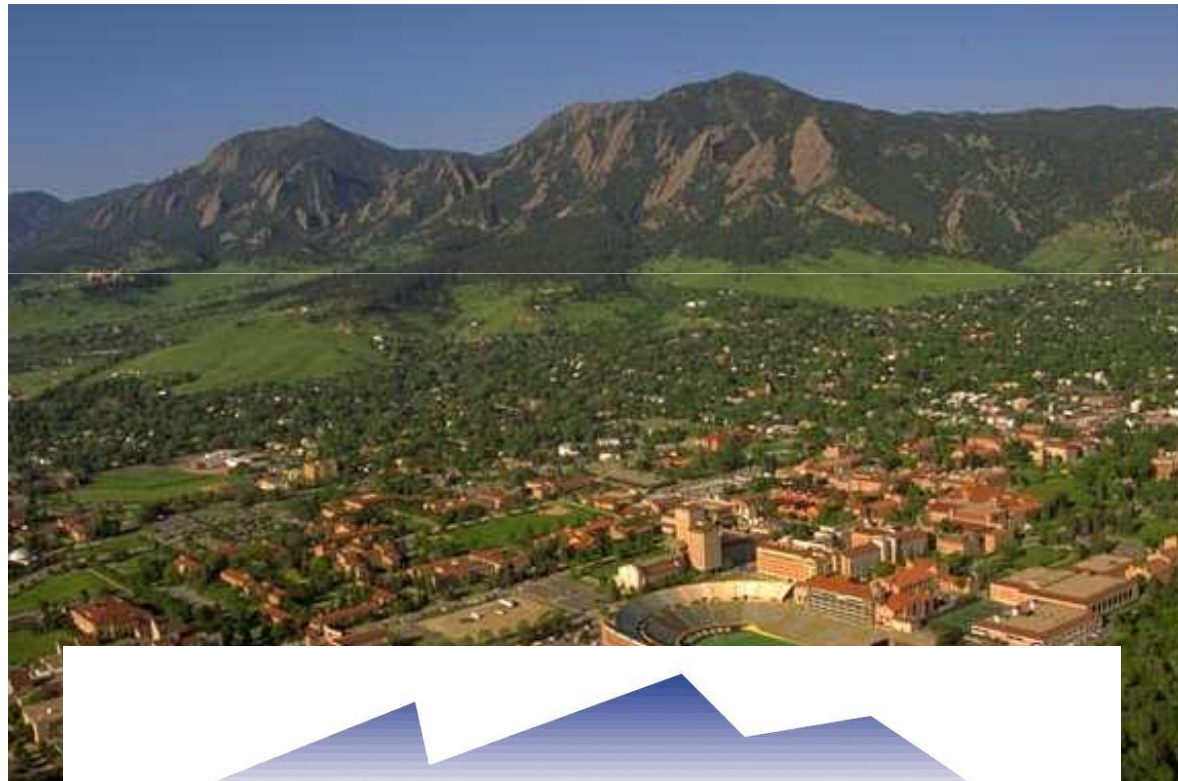
# Mirror Tech Days 2010

Boulder, CO

Tues June 2 to Fri June 4 ??? Memorial Day is May 31

~~June 29 – July 1~~ SPIE Astronomy

July ????



Sponsored by: Colorado Photonics Industry Association



## Mirror Tech Days 2010 - Boulder, CO

### VOTE

June 7 – 11

July 26 – 29

Other Date

### FYI

SPIE Astronomy June 27 – July 1

SPIE Optics and Photonics Aug 1 -5



## Boulder

Colorado is 2<sup>nd</sup> in nation in Aerospace workers  
has 250+ optics & photonics companies  
40% OF THESE ARE IN BOULDER

CPIA is planning tours

Ball Aerospace

NIST

Laboratory for

Atmospheric & Space

Physics (LASP)



Lobby of LASP building



# Millennium Harvest House Hotel

Along US 36 in Boulder  
16 acres along Boulder Creek  
Walking distance to CU plus  
many shops & restaurants  
downtown Boulder just minutes away



Free parking plus car rental on site  
Indoor & outdoor pool, fitness center  
Tennis & basketball courts, tennis &  
bike rentals  
Free high speed Internet access

<http://www.millenniumhotels.com/millenniumboulder/>



Thank You





# Thank You and Acknowledgements

## Organizing Committee:

Dr. David Content, NASA Goddard Space Flight Center

Mr. Cory Duncan, US Air Force Research Lab, Space Vehicles Directorate

Dr. Brian Evans, Lt. Col., National Reconnaissance Office

Dr. Steve LeClair, Missile Defense Agency

Dr. Carol R. Lewis, Jet Propulsion Laboratory

Dr. Larry Matson, U.S. Air Force Research Laboratory, Material Directorate

Dr. H. Philip Stahl, NASA Marshall Space Flight Center

Dr. David Wick, Sandia National Laboratory

NMOIA: Ed Spivak

SPIE: Marilyn Gorsuch

AFRL: Corey Duncan